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Personality and Promotion: An Analysis of the Structured Rank of Female Officers

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Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Kelly Treece

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Walden University
2016

Abstract

Personality and Promotion: An Analysis of the Structured Rank of Female Officers

by

Kelly Treece

MS, Walden University, 2014

MS, University of Wisconsin Platteville, 2011

BS, Mount Senario College of Wisconsin, 1999

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Forensic Psychology

Walden University

December 2016

Abstract

Female law enforcement officers remain an underrepresented population in ranking positions within police organizations in the United States. Current research focuses on systemic factors that inhibit female law enforcement officers within the United States from achieving positions of rank. Grounded in Costa and McCrae's five factor model of personality, this study examined female law enforcement officers' personality traits and their relation to achieved rank. This quantitative study used multiple regression analysis of survey data to determine whether the personality traits of openness, conscientiousness, extraversion, agreeableness, and/or neuroticism alone or in combination predict rank. American female law enforcement officers in both ranking and nonranking positions were sampled from the social media site LEO-ONLY. Data collection included the personality index NEO Five Factor Inventory – 3 survey (a self-report inventory that measured the five domains of personality) and a research-developed demographic questionnaire. Data were collected electronically through the Survey Monkey website. Findings of the study indicated that a statistically significant relationship between the five factor model personality traits alone or in combination with one another and rank of female law enforcement officers was not found. Although the results of the study were not statistically significant, the study results determined that the personality traits of both ranking and nonranking female officers were similar. The results of this study will influence social change by providing a different perspective on influencing factors in rank advancement of female law enforcement officers.

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Dedication

This dissertation is dedicated to my mother and father, Mary and Alan Treece. Thank you for the never-ending love, encouragement, and support you have shown me throughout the years. I love you.

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I must first extend my sincere gratitude to my committee chairperson Dr. Nancy Bostain and my committee content expert Dr. James Herndon for their guidance and mentorship during the completion of my dissertation. I appreciated your candidness and am thankful for your ability to keep me on track. This was a wonderful experience which has changed my life.

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Chapter 1: Introduction to the Study

Introduction

In the late 1800s, women began working in police agencies in the United States, although on a strictly limited basis, and were assigned to overseeing crimes involving women and juveniles (Archbold & Moses Schulz, 2012). It was not until the 1960s that women in U.S. law enforcement began to work along with the men in a contemporary policing position. Although there continues to be slow progression in the U.S. police profession, it remains disproportionately represented by male officers (O'Connor Shelley, Schaefer Morabito, & Tobin-Gurley, 2011). The early foundation of female officers as matrons (those in charge of female and juvenile offenders) has subsided, but the struggle to overcome the gendered division of labor is still present (Kurtz, Linnemann, & Williams, 2012).

One of the most notable gender gaps in law enforcement is the ratio of male to female police supervisors (O'Connor Shelley et al., 2011). In 2002, the National Center for Women and Policing (2005) reported that only 7.3% of large urban U.S. police departments had women in the top command positions. More than half of the large agencies in the United States did not report a sworn female in a supervisory position (Montejo, 2010). While there is extant research focusing on why some female officers choose not to pursue promotion, there is little research on female officer promotion and aspiration for promotion (Archbold & Moses Schulz, 2012).

One facet for selecting qualified police officers for employment is the use of psychological testing. The International Association of Chiefs of Police (2009)

considered psychological testing such an important topic that it created guidelines for national departments to use for preemployment screening and fitness-for-duty evaluation. The guidelines do not, however, extend to promotional testing. Schmidt (2014) argued that personality traits may contribute to occupational performance, which is important for promotions. An exploration of specific traits that are present in ranking and nonranking female police officers may contribute to identifying individuals that would excel in a supervisory position. Salters-Pedneault, Reuf, and Orr (2010) further provided documentation that supports that individuals entering the emergency service professions have specific personality traits that are beneficial to the unique facets of the profession, in particular characteristics that assist in managing stress. Salters-Pedneault et al. focused on personality traits and job selection in police and fire recruits; identifying personality traits that were more commonly present in police officers.

Additional barriers exist that prevent female officers from attaining a promoted position within a police department. Research indicates that there are systemic barriers that attribute to a lack of promotional aspirations to female police officers such as an undesirable position, tokenism within the agency, the negative effect on family, and negative work environment perceptions (Archbold, Hassell, & Stichman, 2010; Gau, Terrill, & Paoline, 2013). Although there is some research that supports systemic barriers to promotion, there is a research gap in what is known regarding personality traits related to police performance and promotion. This study therefore was designed to examine the relationship between personality traits and rank of female law enforcement officers, expanding on previous research that focused on personality traits and officer promotion.

This chapter addresses the background of female law enforcement officers including promotional aspirations, the gender gap in policing, and the current use of personality testing in law enforcement. A concise description of the issues pertaining to promotion for female law enforcement officers is addressed in the problem statement, with a clarification of the purpose of the study and the direction of the study following. The five factor model theoretical framework provided interrelated concepts for the foundation that guided the research. The statistical design, scope, and limitation of the study are discussed in detail. The chapter concludes with an explanation of the significance that the study contributed to scholarly work.

Background

Current literature reflects a wide variety of foci on female policing. Some relevant areas of focus in the literature emphasize both what is known about female law enforcement officers' personality and promotion and what is unknown. Central to this dissertation study was the lack of research on female officer promotion, the gender gap in ranking positions, and promotional aspirations of female officers. Further relevant literature examined was the current use of personality testing in law enforcement, personality testing as a factor in job selection, personality traits and job performance, and personality traits in relation to organizational fit.

Archbold and Moses Schulz (2012), and O'Connor Shelley et al. (2011) investigated the gender gap in policing, focusing on the lack of research pertaining to the retention and promotion of women. The gender gap in policing may be attributed to the percentage of females that apply for employment in law enforcement (O'Connor Shelley

et al., 2011). Much of the research on women in policing has focused on the systemic barriers of law enforcement and the perception of law enforcement being a male-dominated profession (O'Connor Shelley et al., 2011). The barriers included a lack of acceptance into the profession, sexism, tokenism, family obligations, and a lack of agency support (Archbold & Moses Schulz, 2012; O'Connor Shelley et al., 2011). O'Connor Shelley et al. argued that the lack of research on female policing leadership, department procedures focusing on female officer retention, and female officers' experiences throughout specific stages of career trajectory hinder progress for females in law enforcement. Gau et al. (2013) discussed the promotional aspirations of male and female police officers. Demographic factors such as education, race, and gender were found to be significant influencing factors pertaining to the desire for promotion. Gau et al. supported differing characteristics that may influence an officer's attitude towards attaining rank. The noted gap in research pertaining to female officer promotion was the basis for this research study.

The examination of personality traits in relation to police officer selection, promotion, and organizational fit is central to assessing the relationship between personality traits and rank in female law enforcement officers. Detrick and Chibnall (2013) and Dantzker (2011) provided information about personality testing for police officer selection and or employment screening focusing on the five factor model (FFM) and the presence of the personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism in police recruits. Detrick and Chibnall identified the importance of psychological testing, which incorporates personality testing, in police

officer selection and its relationship to police officer success. Detrick and Chibnall supported a correlation between personality traits and successful police officer applicant employment. While performance was not specifically addressed by Detrick and Chibnall, success was measured through completion and passing of the preemployment psychological evaluation. This research was considered in identifying a relationship between psychological evaluations and personality traits in female police officers that have achieved rank within a law enforcement agency and those that have not.

Salters-Pedneault et al. (2010) focused on the personality differences between police and fire recruits and their response to stressful stimuli, finding that the difference in personality between emergency responders further supported personality as a factor in police functioning. In particular, police recruits scored high in the personality traits of extraversion and conscientiousness; Salters-Pedneault et al. supported the identification of specific personality traits in police officers and the relationship to the hypothesis that specific personality traits have a relationship to rank. This is supported by Schmidt's (2014) research that investigated the relationship between the personality trait of conscientiousness and general occupational performance, finding that individuals that had high levels of conscientiousness were predisposed to excel in planning, organization, and achievement. Schmidt's research provided a link between personality traits and adult occupational performance, providing a basis for personality traits and the relationship to career development.

Jackson, Thoemmes, Jonkmann, Ludtke, and Trautwein (2012) discussed how life experiences were associated with personality traits and personality trait changes.

Additionally, the authors examined how military members had lower levels of the personality trait agreeableness after basic training. Jackson et al. (2012) investigated police officers' personality in terms of duration of training and experiences while on the job. Further, life experiences and the relation to personality traits related to research that indicated a lack of agency support and negative work experiences over time hinder female promotion aspirations (Archbold et al., 2010; Archbold & Moses Schulz, 2012; O'Connor Shelley et al., 2011). Gardner et al. (2012) presented information regarding the Five Factor personality traits and organizational fit, finding that individuals with higher levels of conscientiousness and lower levels of openness fit better in organizations that operate on hierarchy. Gardner et al.'s research related to law enforcement organizations as they are paramilitaristic organizations that depend on the hierarchal structure (den Heyer, 2014).

This study was needed to address the lack of research on female law enforcement officer promotion, the gender gap in ranking positions in law enforcement, and the promotional aspirations of female officers. This study also expanded upon current uses of personality testing in law enforcement which currently is only used for preemployment screening. Finally, this study did not find a personality trait difference between female law enforcement officers of ranking and nonranking positions using the NEO-FFI-3 personality index. The study did however find that both ranking and nonranking female officers scored similarly in all five personality domains with an average score.

Problem Statement

Female law enforcement officers continue to remain an underrepresented group within law enforcement. This was especially relevant in the even fewer percentages of female officers holding a ranking position with an agency (Archbold & Moses Schultz, 2012). Despite research on the systemic barriers to promotion for female officers such as gender bias, officer bias, stress, and tokenism (Archbold et al., 2010; Archbold & Moses Schultz, 2012; Hassell & Brandl, 2009), there was no prior research focusing on which women overcame these obstacles and achieved rank. The general problem was that it was not known what personality traits were present in ranking female law enforcement officers versus their nonranking counterparts.

Several personality traits of police officers have been examined pertaining to officer performance, work-related stress, and effective leadership (Garbarino, Chiorri, & Magnavita, 2014; Sanders, 2008; Schafer, 2010). The specific problem investigated in this study was that police officer personality traits had not been examined in relation to promotion, including the relationship between personality traits of female police officers in ranking and nonranking positions. By identifying which personality traits, or combination of personality traits, were present or absent in ranking and nonranking female police officers, this study was designed to assist organizations in developing mentoring and training sessions that are catered to the professional development of their female law enforcement officers.

Purpose of the Study

The purpose of this quantitative study using multiple regression analysis was to examine the relationship between the FFM personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism and a position of rank or no rank for female law enforcement officers in urban and rural law enforcement agencies. The independent variables (predictors) in this study were the FFM's five personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism. The dependent variable (outcome) was the officer's rank.

Research Questions and Hypotheses

Five research questions guided this study:

RQ1: How does the personality trait of Openness relate to rank advancement in female law enforcement officers?

H1₀: The personality trait of Openness does not predict rank advancement among female law enforcement officers.

H1₁: The personality trait of Openness predicts rank advancement among female law enforcement officers.

RQ2: How does the personality trait of Conscientiousness relate to rank advancement in female law enforcement officers?

H2₀: The personality trait of Conscientiousness does not predict rank advancement among female law enforcement officers.

H2₁: The personality trait of Conscientiousness predicts rank advancement among female law enforcement officers.

RQ3: How does the personality trait of Extraversion relate to rank advancement in female law enforcement officers?

H3₀: The personality trait of Extraversion does not predict rank advancement among female law enforcement officers.

H3₁: The personality trait of Extraversion predicts rank advancement among female law enforcement officers.

RQ4: How does the personality trait of Agreeableness relate to rank advancement in female law enforcement officers?

H4₀: The personality trait of Agreeableness does not predict rank advancement among female law enforcement officers.

H4₁: The personality trait of Agreeableness predicts rank advancement among female law enforcement officers.

RQ5: How does the personality trait of Neuroticism relate to rank advancement in female law enforcement officers?

H5₀: The personality trait of Neuroticism does not predict rank advancement among female law enforcement officers.

H5₁: The personality trait of Neuroticism predicts rank advancement among female law enforcement officers.

RQ6: How does the combination of the personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and/or Neuroticism relate to rank advancement among female law enforcement officers?

- H6₀: A combination of the personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and/or Neuroticism does not predict rank among female law enforcement officers.
- H6₁: A combination of the personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and/or Neuroticism predict rank advancement among female law enforcement officers.

Theoretical Framework

The theoretical framework for this study was McCrae and Costa's (1987) five factor model (FFM). The FFM theory is based on the idea that the five personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism are the fundamental dimensions of personality (McCrae & John, 1992). Subsequent research of McCrae and Costa's (1987) theory have supported its use as a valid descriptor of personnel classification in law enforcement (Detrick & Chibnall, 2013; Salters-Pedneault et al., 2010). The FFM provided a broad categorical view of personality traits without the complexity of other trait theories where personality dimensions overlap. The FFM approach supported the assumptions that broad traits are relatively universal across a specific culture, that traits have a social significance across cultures, and that personality traits have minimal covariation (McCrae & John, 1992). The FFM was directly related to the broad and comprehensive measurement of personality traits in each female law enforcement officer. The FFM was not intended to predict or explain behavior, rather, it

was meant to measure and identify both dominant and passive personality traits in each individual.

Each of the FFM's five factors is representative of a larger set of specific traits within the factor (McCrae & Costa, 1997). Openness characterizes a willingness to experience (Gardner et al., 2012; Sanders, 2008). Individuals on the high end of the openness scale reflect traits of creativity, broad-mindedness, and imaginative, while individuals on the low end of the openness scale are more resistive to change, resistive to new experiences, and closed-minded (Gardner et al., 2012; Sanders, 2008). Conscientiousness characterizes reliability (Gardner et al., 2012; McCrae & Costa, 1997). Individuals on the high end of the conscientiousness scale tend to exhibit goal-directed behavior, are reliable, dependable, and responsible; conversely, individuals on the low end of the conscientiousness scale are more careless, easily distracted, and unreliable (Gardner et al., 2012; McCrae & Costa, 1997). Extraversion characterizes assertiveness (Gardner, Reithel, Coglisier, Walumbwa, & Foley, 2012). Individuals on the high end of the extraversion scale tend to be social and direct, while those on the low end of the scale are more reserved, quiet, and shy (Gardner, Reithel, Coglisier, Walumbwa, & Foley, 2012). Agreeableness characterizes compliance (Gardner et al., 2012). Those on the high end of the agreeableness scale are cooperative, likeable, courteous, and flexible, while those on the low end are more uncooperative and irritable (Gardner et al., 2012). Neuroticism characterizes emotional stability (McCrae & Costa, 1997; Sanders, 2008). When an individual rates high on the neuroticism scale, there is a tendency for that individual to exhibit irritability, insecurity, and anxiety, further, those high on the

neuroticism scale tend to be discontented and have emotional outbursts (McCrae & Costa, 1997; Sanders, 2008).

As applied to this study, the FFM represented the five personality trait dimensions that all female officers possessed. As noted by McCrae and Costa (2003) the traits that researches identify and use to classify individuals and the predisposition of behavior actually only provides a dimension of the tendency for a consistent pattern. Examining the five personality dimensions in female police officers of ranking and nonranking positions examined the pattern of personality traits in each group.

Nature of the Study

This quantitative, correlational study utilized multiple regression analysis. I specifically examined the relationship between the personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism and rank of female law enforcement officers. Multiple regression permitted studying more than one variable at a time (Stangor, 2011). The scores of the assessment of the personality traits of openness, conscientiousness, extroversion, agreeableness, and neuroticism in ranking and nonranking female law enforcement officers were examined. Multiple regression analysis determined if there was an interaction effect between the FFM personality traits and the prediction of rank. The independent variable (predictor) was one or more identifiable personality traits; including, openness, conscientiousness, extraversion, agreeableness, and neuroticism. The dependent variable (outcome) was rank or no rank. Since dichotomous variables cannot be meaningfully interpreted in multiple regression analysis, dummy coding was

incorporated to enhance interpretation of data. Indicator/dummy variables were simultaneously set as independent variables to enhance interpretation.

Using a correlational design, multiple regression analysis was conducted to assess the relationship between personality traits of female officers and rank within a law enforcement organization. A survey was given out using Survey Monkey to female law enforcement officers in both urban and rural areas. This incorporated all female officers, both ranking and nonranking. The survey incorporated the five factor model to measure personality traits. This was accomplished by using the NEO Five Factor Inventory – 3 (NEO-FFI-3), a self-report measurement tool that allowed me to measure the FFM's five personality dimensions. SPSS software was used to calculate the data gathered. The determination of a correlation did not imply that the individuals identified would achieve a promoted rank.

Definition of Key Terms

Nonrank: Sworn law enforcement officers that do not hold a supervisory role (Densten, 2003).

Rank: Sworn law enforcement officers within appointed supervisory role (Densten, 2003).

Assumptions of the Study

It was assumed that only female law enforcement officers would complete the survey. Since the survey was administered in an online environment, there was no way to verify the gender of the respondent. Clear directions were given at the beginning of the survey to indicate that it was for female officers only. Prior to beginning the survey, all

respondents verified their gender in the demographic survey. Any male respondents were immediately redirected to an exit letter thanking them for their participation and providing them with my name and contact information so that contact could be made if they had any questions and/or concerns about any aspect of the research.

It was assumed that all participants would answer all questions about rank within their respective law enforcement agency honestly. The participants were informed that their identifying information would be confidential to increase the likelihood of an honest answer. It was assumed that all participants would answer honestly on the NEO-FFI-3 questionnaire. Permission to use the NEO-FFI-3 was obtained through Psychological Assessment Resources, Incorporated (PAR) (Attachment C). PAR required individual log in to enhance confidentiality. It was also assumed that all tools that were used to measure personality traits were reliable and valid. Finally, it was assumed that the five factor model was the appropriate framework for this study.

Scope and Delimitations

The scope of this study involved sworn female law enforcement officers of ranking and nonranking positions. To increase generalizability, participants were solicited from both large and small urban and rural law enforcement agencies. This study focused on examining the relationship of specific personality traits and rank within a police agency. In order to do so, the research targeted female law enforcement officers from both rural and urban departments with the understanding that organizational factors may influence promotion. Specific aspects addressed included individualized personality traits, rank, and demographics within the respective agency.

The study was designed to examine the relationship between personality traits and rank within law enforcement for female police officers. Using the survey method design, the study utilized voluntary research participants. By gathering the participant's data through a survey, it was believed that participants would answer honestly without fear of retribution from their respective organization. The study provided insight regarding a relationship between specific personality traits and the attainment of rank. Studying the relationship between personality traits and rank was important because it provided data that indicated if personality traits had a relationship to rank or if a combination of personality traits had a relationship to rank. Research did not begin until approval was gained through the Walden University Institutional Review Board.

The delimitations of the study included the participants. Non-sworn personnel employed by law enforcement agencies, including civilian police, were not included as the professional duties differ from sworn personnel.

Limitations of the Study

There are limitations of this study that must be considered. An online survey method was used. The objectivity of a survey gathering the self-report questionnaire data through an online social media website may have been distorted by mono-method and mono-source bias. Only those female officers that used the specified social media website LEO-ONLY and female officers that they recommended the survey to were included. I attempted to collect data in timely intervals to reduce such bias, in alignment with Podsakoff, MacKenzie, Podsakoff, and Lee (2003).

A second limitation was that the department location was not addressed. The department location was not collected as it was believed that this may have inhibited a participant from completing the survey due to perceived retaliation from their department. It was recognized that geographical location may have a difference on perceptions of female and male law enforcement leadership. I attempted to minimize bias by targeting both large urban and small rural departments as this was representative of the profession as a whole.

A third limitation was my background as a retired female police Sergeant. While none of the participants were professionally or personally associated with me, they may have been aware of my background. Inclusion into the online social media webpage LEO-ONLY required proof of a current or retired law enforcement status. This information may have made it more likely or less likely that the participants submitted honest answers. In an effort to minimize possible bias, I refrained from participating in a social context on the webpage.

A final limitation was that of multiple regression research. Multiple regression, as with all regression methods, can only determine relationships but cannot determine any underlying causal mechanisms. Multiple regression does not provide a cause and effect; rather it examined the likelihood that the independent (predictor) variable predicted the dependent (outcome) variable. An example of the limitation in this study was that a specific personality trait, or combination of traits, may or may not have predicted rank within a law enforcement agency. The methodology did not take any causal factors (officer bias, police stress, and tokenism) into account.

Significance of the Study

The significance of this study was to determine if there was a personality trait difference between female officers of rank and no rank positions. Determining if there was a difference in personality traits would allow police departments to identify females that have specific traits that are predisposed to leadership roles. Gardner et al. (2012) found that individuals with high levels of conscientiousness and lower levels of openness advance in hierarchal structures which focus on structure regardless of gender. Detection of specific personality traits that are related to rank may assist law enforcement agencies in early identification of female officers that possess those personality traits. Departments could then guide these identified female officers through the promotion process with current mentoring and educational programs while also addressing the systemic barriers that are already known. If it was determined that there was a relationship between personality traits and rank within law enforcement for female officers, then the study could be replicated for male officers. Further, this study could become the foundation for police development regarding personality testing for police officers during the hiring process and promotional exams.

The knowledge of the personality traits or combination of personality traits that have a relationship to rank may also assist in developing mentoring programs that are directed to advance females in the law enforcement profession, thus minimizing the gender divide in ranking positions. Moreover, identification of these individuals could allow for mentoring within the organization, educational programs to reduce systemic barriers, and a change in hiring and recruitment for successful female candidates.

Determining the relationship between personality traits and the promotional growth of female law enforcement officers has significant impact on the future of law enforcement. Early detection of specific personality traits that are related to promotional growth will allow law enforcement agencies to identify and foster individuals with those personality traits into ranking positions within the agency. Early identification can assist in placing those female officers in mentoring programs specifically designed to increase female promotional growth.

Summary

In summary, it was anticipated that this study would build upon the limited literature involving the promotional aspirations of female law enforcement officers and the relationship to individual personality traits. Current literature regarding female police officers was extremely limited in terms of female officer promotion, promotional aspirations, and the gender gap in policing. Generally, studies regarding law enforcement and promotion focused on the profession as a whole, minimizing obstacles that inhibited minorities and not the majority white male.

It was important to examine the relationship between female police officers personality traits and their position of rank. The problem this study focused upon was that police officer personality traits have not been examined in relation to promotion. Examining the five personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism and their relationship to rank provided insight into which personality traits or combination of traits is more present in female police officers of rank. Using the FFM to measure dominant and passive personality traits provided a basis

for a classification system when examining personality traits in ranking versus nonranking female officers.

The use of a quantitative study, specifically multiple regression, provided the platform to be able to examine more than one variable at a time. This was necessary with the five independent (predictor) variables of openness, conscientiousness, extraversion, agreeableness, and neuroticism. Ultimately the use of multiple regression determined if there was an interaction effect between the predictor variables and the outcome variable.

After data were collected and there was a determination on the relationship between personality traits and rank, the information could be used to address promotion in regards to female officers. This information may also be used to develop policy and procedures for personality testing for new hires and for promotional exams. The results of this study may also be used to develop mentoring programs for female officers, education programs to minimize gender bias within the department, and recruitment of female officers.

In Chapter 2, the five factor model is explained regarding personality traits and female leadership biases. A review of studies pertaining to gender roles, systemic barriers, promotional aspirations, personality traits, and preemployment screening is presented.

In Chapter 3, the research methodology is explained, including the research design and rationale. Further, a description of the instruments used, sample size, participants, and methods used to analyze the data is described.

Chapter 2: Review of Literature

Introduction

The purpose of this research was to study whether the personality traits of female police officers were related to their attained rank within their department. One of the most notable gender gaps in law enforcement is the ratio of male to female police supervisors (O'Connor Shelley et al., 2011). While there is research focusing on why some officers choose not to pursue promotion, I identified little research specifically on female officer promotion and aspiration for promotion (Archbold & Moses Schulz, 2012). This study therefore examined the possible barriers associated with promotion for female police officers, including the use of psychological testing for police employment and the relationship to personality traits.

In this chapter, I review relevant literature on gender roles, systemic barriers, promotional aspirations of female police, personality traits, and preemployment screening. A description of the literature search parameters was included to assist in achieving this objective. A comprehensive literature review that examined the female police officer and the five factor model is presented. Finally, a summary and conclusion of the aforementioned sections is presented.

Literature Search Strategy

The literature included in this review was obtained from Walden University's Library. The EBSCO Host database system was the primary system used to access scholarly and peer-reviewed articles. The databases utilized in this research include: (a) PsycINFO, (b) PsycARTICLES, and (c) SocINDEX. Additional database systems used

were SAGE Premier and ProQuest Criminal Justice. The key terms used included: police, female police, police personality, police leadership, promotion, police promotion, personality trait development, gender and leadership, job performance, police performance, gender differences in policing, and five factor model. I primarily examined literature published from 2011 to 2016. In cases where limited information was found, such as systemic barrier and gender in policing, the search was extended from 2008 to 2016.

Theoretical/Conceptual Framework

The five factor model (Costa & McCrae, 1987) was the theory applied to this study for a more in-depth examination of the female police officer and personality traits. The five factor model was addressed as a foundation for female police personality traits. The five factor model focused on the dimensions of personality

Five Factor Model (FFM)

The FFM theory is based on the idea that the five personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism are the fundamental dimensions of personality (Costa & McCrae, 1987). The FFM provided a broad categorical view of personality traits without the complexity of other trait theories where personality dimensions overlap. The FFM approach supported the assumptions that broad traits are relatively universal across a specific culture, that traits have a social significance across cultures, and that personality traits have minimal covariation (McCrae & John, 1992).

The FFM has been shown to be consistent across cultures, has a clearly defined conceptual framework, and is founded on underlying research (Costa & McCrae, 1987; Robertson & Callinan, 1998). Costa, Terracciano, and McCrae (2001) conducted a study that examined the differences in personality traits specific to gender across differing cultures, including 24 cultures across five continents in their data set. The authors used the FFM traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism to determine the extent of difference of these traits and gender. Costa et al. (2001) argued that in cultures where clearly defined gender roles are blurred, such as the United States and Europe, there tend to be more significant gender differences in personality traits.

Criticism of the FFM was that the facets within each broad domain are not statistically independent. Samuel and Widiger (2008) opined that some facets of the FFM relate to more than one domain. For example, impulsiveness may relate to both neuroticism and conscientiousness. Due to the FFM domains not being entirely statistically independent, there was an increased likelihood of a cross relationship between a single facet and multiple domains. A second criticism of the FFM was that it is not narrowed to a specific theoretical perspective. Widiger (2000) argued that this criticism is invalid as classification systems should be compatible with various theoretical models in a variety of theoretical orientations.

The FFM related to the broad and comprehensive measurement of personality traits in each female law enforcement officer. The FFM was not intended to predict or explain behavior, rather, it was meant to measure and identify both dominant and passive

personality traits in each individual. Subsequent research of McCrae and Costa's (1987) theory provided support as a valid descriptor of personnel classification in law enforcement (Detrick & Chibnall, 2013; Salters-Pedneault et al., 2010). The FFM has further been linked to person-organization compatibility and success (Gardner et al., 2012).

Literature Review

The studies related to female police officer promotion, including the strengths and weaknesses of the approach of such a focused topic, were reviewed. In doing so, it was apparent that facets such as past and current historical data on female officers, gender roles within the organization, systemic barriers, and promotional aspirations be considered. Further, known personality trait research, as well as, psychological testing pertaining to preemployment screening was examined.

Demographics of Female Officers in Law Enforcement

Collection of statistical data pertaining to female law enforcement officers has historically been complex. Beginning in 1997 statistics have been collected regarding women in law enforcement, including presence in rank (National Center for Women and Policing, 2005). Since this information was collected through survey, a margin of error must be considered as not every department reports demographic data (Federal Bureau of Investigation, 2013; Bureau of Justice Statistics, 2010; Moses Schultz, 2004). The data calculations for women in law enforcement are classified into two entities: large urban departments with >100 sworn officers and small rural departments with <100 sworn officers. The most recent study conducted by the National Center for Women and

Policing (2005) was conducted in 2001 and estimated that the U.S. national average for all female police officers was 11.2%. The average of female officers was subdivided into the two entities of large urban departments at 12.7%, and small rural departments at 8.1% (National Center for Women and Policing, 2005). More recent data from the Bureau of Justice Statistics supported the aforementioned statistical data, however, focused on three specific types of agencies. According to the U.S. Department of Justice, Bureau of Justice Statistics (2010), in 2007 the estimated female officer population was 12% in local departments, 6.5% in state departments, and 11.2% in sheriff's departments. The data is further supported by 2013 statistics that female officers account for approximately 11.6% of the law enforcement population (U.S. Department of Justice, Federal Bureau of Investigation, 2013). All reported data were subject to scrutiny as not all departments report this data (NCWP, 2005).

Percentages for female law enforcement officers have slowly been increasing throughout the U.S.; however, leadership positions within agencies are lacking (Montejo, 2010). In 2002, the National Center for Women and Policing (2005) reported that only 7.3% of large urban departments had women in the top command positions. More than half of the large agencies in the United States did not report a sworn female in a supervisory position (Montejo, 2010).

Internationally the underrepresentation of females remains constant in law enforcement. Prenzler and Sinclair (2013) conducted an international study on the status of women in law enforcement in North America, Europe, Asia, Australia, and Africa. The highest estimated percentage of female officer employment from the 18 countries

surveyed was in Tasmania in 2011, representing 28.8%. The United States, however, came in the second lowest at 11.8% in 2010 with only India reporting lower percentages of 5.1% (Prenzler & Sinclair, 2013). The authors surmised that male dominated cultures may have a negative influence on the percentage of female officers. The data, however, were contradictory to their findings where male dominated cultures such as South Africa, Fiji, and Ghana had higher statistical female officer employment than the United States (Prenzler & Sinclair, 2013).

Gender Roles

Women and men are held to a different standard in the career field. Law enforcement has commonly been referred to as a masculine profession (Hunt, 1990; O'Connor Shelley, Schaefer Morabito, 2011; & Tobin-Gurley, 2014). In fact, early studies found that police officers that were considered successful and had positive performance reviews were those that were masculine and assertive (Hogan, 1971). This “good old boy network” creates a perception of gender division within policing from both male and female officers (Montejo, 2010, p. 289). Both male and female officers are subject to stereotypical role identification counterparts (Kurtz et al., 2012). Females are considered more nurturing, emotional, empathetic, less intimidating, and physically weaker than their male counterparts (Kurtz et al., 2012; Lonsway, 2008). These distortions lead female police to the perception that they have the burden of proving themselves in this profession more than men do (Lonsway, 2008).

While there are noted differences in gender, the misconception of compartmentalizing female officers into gender-segregated roles limits professional

progress. For example, female officers are traditionally more commonly associated with special victim units including crimes against women and children (Kurtz et al., 2012; McCarty, 2013). Morash and Haarr (2012) conducted a study on gender identities of female police. The authors conducted the study by using a snowball sampling of 21 female police officers of ranking positions in two Southwestern United States metropolitan police departments. Through interviews, the authors found that lower ranking female police tended to ascribe to a more traditional gender role than their higher ranking counterparts. Morash and Haarr's study related to this research as gender roles are a mediating variable that needed to be considered. Determining the relationship between female police officer personality traits and rank added to differences between nonranking and ranking female officers.

Archbold et al. (2010) conducted a study on promotional ambitions of male and female officers. Archbold et al. surveyed a Midwestern police department comprising of 109 sworn officers, with 87 surveys being completed. The majority of the male officers reported that they believed that female officers were more supported than males within the police department. The Archbold et al. results indicated a glaring difference in perception from the male and female officers of various departments and also highlighted the male-dominated ideology of law enforcement being the catalyst for this perception. It is a question of whether or not individuals are being held to the same standard.

The perception that female officers miss work due to sickness more often than men was another theme that added to the gender role division (Archbold et al., 2010). Pregnancy and motherhood may have reinforced this perception. Discrimination towards

female officers may have been amplified during an officer's pregnancy or motherhood; characteristics that amplified femininity in a masculine setting (Cowan & Bochantin, 2009; O'Connor Shelley et al., 2011).

Gender bias was not only limited to the male officer's perception of a female in law enforcement, both civilians and women within the department contributed to biased perceptions. Montejo (2010) argued that the gender divide in law enforcement perpetuated an insufficient pool of mentors and a lack of internal training opportunities for females. Female officers' inability to maneuver the police culture at the same rate as the male officers impeded their ascent to promoted positions. The internal subculture of the police department has been recognized as the largest obstacle to overcome (Archbold et al., 2010; Archbold & Moses Schultz, 2012).

Both the external perception of the female officer as well as the female officers' own perception varies upon individual experiences within the organization, the culture of the specific department, and the time frame in which she was hired. Sexual harassment, little or no departmental support, and doubt from male counterparts pertaining to their competencies and abilities based on gender all contributed to this perception (O'Connor Shelley et al., 2011; Cowan & Bochantin, 2009). Researching gender differences within law enforcement was important as identifying the gender disparities reinforced the disproportional opportunities in obtaining rank. The present research results may further identify characteristics specific to female officers and the desire to obtain rank.

Systemic Barriers

There are multiple barriers that police departments cite as reasons that females are not promoted. In a survey of 800 police chiefs, 18% indicated that there were not enough women on their department to promote any of them, 13% stated that there were no promotional opportunities, 9% admitted that gender bias limited female advancement, and 6% acknowledged that women would not be accepted within their organization (Montejo, 2010). These results were similar to Shoenfeldt and Mendel's (1991) finding of similar bias towards female police officers in a survey of 226 police chiefs and the response to an officer involved shooting scenario. The findings indicated that the police chiefs were more apt to fire a female trainee in the scenario than a male trainee. Shoenfeldt and Mendel's findings brought to the forefront that the internal structure of the agency significantly impacted equal opportunities for promotion pertaining to implementation and outcome procedures.

Officer bias. A significant obstacle for promotion with female officers was bias in police departments (Archbold & Moses Schulz, 2012; Kingshott, 2013; Lonsway, 2008; O'Connor Shelley et al., 2011). Female officers, as opposed to their male counterparts, have a higher potential to experience gender negative interfaces and hostility. Further, female officers are more likely to experience stigmatization, rumors, gendered sexually explicit jokes, and group blaming than male officers (Hassell & Brandl, 2009).

Multiple studies document the high rates of sexual harassment experienced by female officers from men within the profession. Haarr and Morash (2013) conducted a

study of 21 female law enforcement officers in a Southwestern metropolitan police department to explore sexual harassment within a police organization. In-depth interviews resulted in identifying that 75% of female officers having less than eight years of experience indicated they had been the subject of sexual harassment. Haarr and Morash's study supported an earlier study by Brown (1998) in which 70% of female officers reported sexual harassment. McLaughlin, Uggen, and Blackstone (2012) asserted that in male-dominated work cultures, isolation due to gender nonconformity heightened the potential for sexual harassment.

The opinion that female officers are excessively emotional, are ill-equipped to resolve violent encounters, are not as physically capable, and make the profession more dangerous and less rewarding strengthened these biases (Kingshott, 2013; Poteyeva & Sun, 2009). Further sustaining the masculine dominated stereotype was the idea that female officers do not possess the warrior mentality and physicality. Conti (2011) conducted a study of the different physical standards of police physical standards in training. One recruit commented, "The double standard violates the 'Civil Rights' of male officers who could meet the female standard, but lack the requisite vagina." (Conti, 2011, p. 421). Gender specific negative comments and discernments stunt female officers in the desire for advancement (Archbold & Moses Schulz, 2012).

Promotional Aspirations of Female Officers

When female officers considered promotions, they often faced challenges from within the agency. Archbold et al. (2010) found that female officers were hesitant to seek a promotion. Furthermore, they also tended to lack confidence in themselves and did not

believe that they warranted a promotion, thus perpetuating workplace disadvantage (Moses Schultz, 2004). The initiative to hire female police officers is a longstanding and controversial issue (Gustafson, 2013). The perception that police departments are only promoting females to meet a quota perpetuated the resistance of female officers to apply for promotion (Lonsway, 2008). The rush by police agencies to fill ranking positions with females resulted in promoting female officers that had not had proper training and education and left them unprepared for the position, resulting in failure (Lonsway, 2008). Both male and female officers have shared the belief that female promotion within the department was merely a public relation campaign, not something that was based on merit (Gau, Terrill, & Paoline, 2013).

Perceptions regarding the objectivity of the promotional system were another concern for female officers (Archbold et al., 2010). In 2001, the National Center for Women and Policing (2005) conducted a study on female law enforcement officers to determine the status and growth of the profession. The study comprised the results of two surveys, one by the National Center for Women and Policing of large urban law enforcement agencies, and the other by the Safety Center of Eastern Kentucky University of small rural law enforcement agencies. The results of the combined studies reported that female officers have indicated that they chose not to participate in promotional exams because the promotional process appeared to be prearranged or because they perceived that the goal was unattainable (National Center for Women & Policing, 2005).

In another example, Guajardo (2014) conducted a study on New York Police Department's gender disparity. Employment data from 2011 was analyzed, including

ethnicity, race, and gender. According to the study, discrimination was found to be highly prevalent in higher ranking positions, with few ethnic individuals and females being promoted over the rank of Sergeant. According to Kingshott (2013) agency reform pertaining to gender division has historically not been a priority. The female officers that accept the gendered stereotypes within law enforcement unwittingly contributed to the philosophy that generates departmental bias in the promotional process (Archbold et al., 2010).

Family responsibilities and raising children are cited as reasons that many female police officers do not participate in the promotional process (Archbold et al., 2010; Lonsway, 2008). Archbold et al. argued that there was a perception that female officers with family duties do not have sufficient time to both raise a family and fulfill the time consuming role of a police officer. O'Connor Shelley et al. (2014) opined that in the male-dominated profession of policing female officers forgo having children due to insufficient maternity policies. Conversely, other female officers have chosen to sacrifice promotional opportunities to focus on family. Fewer overtime opportunities and extended childcare expenditures also contributed to the negative perceptions that female officers assigned to career advancement (Archbold & Moses Schultz, 2008). These gender substructures are only fed by the predominately male culture of long working hours and aggressive behavior which force female officers to choose between pursuing their career goals and fulfilling their expected roles of mother and wife (Archbold et al., 2010).

Gender discrimination was another reason female officers chose not to apply for promotion (Archbold et al., 2010). Haarr and Morash (2013) argued that female officers

experienced higher levels of discrimination in law enforcement. Due to this, female officers have developed coping strategies in order to be taken seriously within an agency. Ranking female officers cited that they have had to prove their capabilities, including physical capabilities, to minimize bias from the male officers (Haarr & Morash, 2013). There was a persistent belief among female officers that if promoted there would be an on-going time-frame in which they would continuously have to demonstrate their capabilities as a supervisor wherein a male officer would not have the same burden (National Center for Women & Policing, 2005). Archbold, Hassell, and Stichman reported that tokenism issues significantly deter the desire for promotion.

Personality Traits

There was a vast amount of research dedicated to personality traits and the correlation to gender, culture, behavior, and many other facets. Lacking, however, was research pertaining to personality traits and the relationship to police promotion. Sanders (2008) conducted a study of 96 police officers from rural police departments to determine if the use of personality trait identification would be a useful tool in officer selection for employment. The results of the study indicated that personality traits did not have as large of an impact on police performance than age and attitude did. Sanders argued that the lack of research regarding personality traits and law enforcement was due to a disagreement regarding what personality traits are considered desirable for police officers. The failure to agree on desirable personality traits is compounded by the belief that personality traits are different in men and women and that law enforcement is more commonly associated with male characteristics (Morash & Haarr, 2012). Some research

that addressed the concept of personality traits and job performance used the police academy as an outcome measure rather than actual job performance (Sanders, 2008). Further problems with categorizing which personality traits are desirable for police officers falls upon individual departments. What may be considered a desirable trait in one agency may not be in another (Sanders, 2008). While the Sanders study focused on personality traits and police performance, it was considered as a means of assimilating personality traits and the desire to achieve rank.

Police leadership and personality traits have been involved in a variation of studies. Schafer (2010) conducted a study that examined effective leaders and leadership traits in law enforcement. A convenience sample from various police agencies was used to survey 1,000 police supervisors. Schafer found that specific traits such as communication, a good work ethic, genuine care for the employees, and high integrity were considered successful and effective leaders by their subordinates. Schafer further suggested that the traits considered effective in his research could be linked to personality traits and leadership development. This study built upon Schafer's study and further developed the relationship between personality traits and rank.

Gender differences are also present in research regarding leadership and personality traits. The major difference in gender characteristics of leadership found that women tend to adopt a more participative style of leadership, allowing subordinates to join in decision making, while men tend to adopt a more directive style of leadership, sole decision making without subordinate input (Eagly & Johnson, 1990).

Policing was often described as a paramilitary organization. Some researchers argue that simply defining law enforcement as paramilitaristic or militaristic is difficult due to blurred roles and individual differences (den Heyer, 2014; Kappeler & Kraska, 2015). Regardless of the specification, policing can be described as a hierarchal culture with a chain of command and set structure that is followed. Gardner et al. (2012) conducted a study examining the relationship between personality traits and organization fit. The participants included 265 undergraduate management students from a Southeastern University in the United States that participated in a web based experiment assessing their organizational culture profile. The results of the Gardner et al. study indicated that specific personality traits fit better into certain organizations than others. Gardner et al. further described four cultural models (clan, hierarchal, adhocracy, and market) to which organizations adhere to. The hierarchy culture was centered on control, rules, policies, and procedures, which could be ascribed to the role of policing. In the hierarchal structure individuals that rate higher on conscientiousness and lower on agreeableness were a better fit with the organization. Highly conscientious individuals reacted positively to the structure of the hierarchal culture (Gardner et al., 2012). In other studies, conscientiousness has been found to be a predictor of occupational performance (Schmidt, 2014). While the Gardner et al. study differed from this research; it did lend support to a relationship between personality traits and job selection. Determining the relationship between personality traits and rank within law enforcement added to the Gardner et al. findings about hierarchal organizations.

Recent research indicated that personality traits were correlated to joining the emergency services profession and the military (Jackson et al., 2012; Salters-Pedneault, Reuf, & Orr, 2010). Jackson et al. (2012) conducted a longitudinal study on German males that focused on the decision to enter the military. The findings showed that those individuals with lower scores of openness, agreeableness, and neuroticism were more likely to enter the military than individuals high in those personality traits. Additionally, military training was associated with changes in personality traits; specifically, upon completion of training military recruits scored lower on agreeableness than when originally tested. Salters-Pedneault et al. (2010) conducted a quantitative study using secondary data on police and firefighter recruits in Boston training academies. When comparing police and fire recruits, police recruits had higher levels of conscientiousness and extraversion. Further, when compared to the general public, police recruits scored higher in the extraversion domain (Salters-Pedneault et al., 2010). Individuals that entered the military also had a correlation in personality traits relevant to militaristic operations. Those individuals scored lower in openness, agreeableness, and neuroticism (Jackson et al., 2012).

Preemployment Screening

The use of psychological testing for preemployment screening is known for including a variety of assessments that focus on suitability factors, emotional stability, and personality traits (Ben-Porath et al., 2011). Dating back to the early 1970's, the National Advisory Commission on Criminal Justice Standards and Goals (1973) compiled a report that endorsed the use of psychological evaluations for prospective

police candidates by a licensed psychologist or psychiatrist. Since that time, numerous psychological assessments have been used for preemployment screening in law enforcement. The more popular tools included the Minnesota Multiphasic Personality Inventory II (MMPI-II), the NEO Personality Inventory (Revised) (NEO-PI-R), the Personality Assessment Inventory (PAI), California Psychological Inventory (CPI), Inwald Personality Inventory, and the Sixteen Personality Factor (Dantzker, 2011; Lowmaster & Morey, 2012).

The use of preemployment screening to assess personality traits is often used in two subsets: suitability and performance. Lowmaster and Morey (2012) contended that psychological testing for police candidates assisted in identifying personality characteristics that make a candidate unsuitable for the profession. While psychological testing has been shown to be a suitable way to identify candidates that are not a good fit for the police department, there is little evidence that supports that such testing predicted successful officer performance (Sanders, 2008).

Detrick and Chibnall (2013) conducted a study on the personality traits present in police applicants. Data were collected from preemployment psychological evaluations from 288 police officers employed at a large Midwestern police department. The authors found that specific personality traits have a correlation to performance. Specifically, openness was associated with academic grades in the academy, conscientiousness was associated with performance, and neuroticism was associated with discipline issues (Detrick & Chibnall, 2013). Judge, Rodell, Klinger, Simon, and Crawford (2013) supported the argument that personality traits are correlated to job performance. In a

quantitative study, Judge et al. conducted a meta-analysis of published research involving the five factor model and job performance. Openness was found to have the highest relationship to performance, however, all traits were found to contribute to performance and that faceted personality traits may be a more effective predictor of performance than broad personality traits (Judge et al., 2013).

The United States military also used forms of the Big Five to predict long term military success, job performance, and retention. Stark et al. (2014) assessed three personality tests used by the United States military for individual selection, internal classification, and screening. Two of the three testing methods assessed, the Assessment of Individual Motivation (AIM) and the Tailored Adaptive Personality Assessment System (TAPAS), incorporated part or all of the Big Five personality traits. Both AIM and TAPAS have identified individuals that performed well and have had success in the military (Stark et al., 2014).

This study incorporated the empirical research regarding personality traits and police performance as it had shown a relationship between personality traits and performance. While this is significantly different than a relationship between personality traits and rank, it did lend support to the idea that certain personality traits are more present in successful police officer selection.

Summary

Future diversification in policing, specifically females in ranking positions, is dependent on the police culture and the ability to make change. The documentation of gender role incongruity within the policing culture including workplace diversity, gender

discrimination, gendered images, systemic barriers, and promotional aspirations highlight the imbalance within the profession and the struggle to achieve rank (Archbold et al., 2010; Guajardo, 2014; Haarr & Morash, 2013; Kurtz et al., 2012). Gender roles within the police department are a significant factor in female promotion. Much of the research focused on the perceived communal role of the female officer, as well as, the agentic role of the male officer (Kurtz et al., 2012; Lonsway, 2008; O Connor Shelley et al., 2014). The stereotype of gender roles along with the systemic barriers of officer bias, police stress, and tokenism perpetuate the resistance of female advancement (Archbold et al., 2010).

Personality traits and their relationship to job performance in law enforcement are extremely limited. The conflict centers on which personality traits are considered desirable for police officers (Morash & Haarr, 2012; Sanders, 2008). While there was ample research pertaining to personality traits and preemployment screening to identify undesirable candidates, little research has focused on what traits make a good or successful officer (Ben-Porath et al., 2011; Lowmaster & Morey, 2012). This study examined the correlation between personality traits, or a combination of traits, which are present in female law enforcement officers and the status of ranking and nonranking positions. The intent was to identify leadership qualities in female officers. Identification of such leadership qualities in female officers and the proper nurturing of those qualities through mentoring to further enhance female officer promotional aspirations are paramount for the successful growth of the organization, individual employees, and community members.

Chapter 3: Research Method

Introduction

The purpose of this quantitative correlational study was to examine the relationship between the five factor model (FFM) personality traits of openness,

conscientiousness, extraversion, agreeableness, and neuroticism (predictor variables) and rank (outcome variable) within a law enforcement agency for female officers. The study focused on the following research questions and hypotheses:

RQ1: How does the personality trait of Openness relate to rank advancement in female law enforcement officers?

H1₀: The personality trait of Openness does not predict rank advancement among female law enforcement officers.

H1₁: The personality trait of Openness predicts rank advancement among female law enforcement officers.

RQ2: How does the personality trait of Conscientiousness relate to rank advancement in female law enforcement officers?

H2₀: The personality trait of Conscientiousness does not predict rank advancement among female law enforcement officers.

H2₁: The personality trait of Conscientiousness predicts rank advancement among female law enforcement officers.

RQ3: How does the personality trait of Extraversion relate to rank advancement in female law enforcement officers?

H3₀: The personality trait of Extraversion does not predict rank advancement among female law enforcement officers.

H3₁: The personality trait of Extraversion predicts rank advancement among female law enforcement officers.

- RQ4: How does the personality trait of Agreeableness relate to rank advancement in female law enforcement officers?
- H4₀: The personality trait of Agreeableness does not predict rank advancement among female law enforcement officers.
- H4₁: The personality trait of Agreeableness predicts rank advancement among female law enforcement officers.
- RQ5: How does the personality trait of Neuroticism relate to rank advancement in female law enforcement officers?
- H5₀: The personality trait of Neuroticism does not predict rank advancement among female law enforcement officers.
- H5₁: The personality trait of Neuroticism predicts rank advancement among female law enforcement officers.
- RQ6: How does the combination of the personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and/or Neuroticism relate to rank advancement among female law enforcement officers?
- H6₀: A combination of the personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and/or Neuroticism does not predict rank advancement among female law enforcement officers.
- H6₁: A combination of the personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and/or Neuroticism predict rank advancement among female law enforcement officers.

This chapter provides a detailed discussion of the quantitative methods that were used in the research. It includes a discussion of the research design and rationale for the chosen design, participant sampling, data collection, instrumentation validity, and data analysis. The chapter concludes with a discussion on threats to validity and ethical considerations.

Research Design and Approach

In this quantitative correlational study, multiple regression was used to examine the relationship between personality traits and rank in female law enforcement officers. This approach was appropriate for predicting a variable based on multiple other variables, which was a study goal. The independent variables (predictor variables) in the study are the FFM personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism. The dependent variable (outcome variable) was rank of female law enforcement officers. The primary data collection tools were the NEO Five Factor Inventory – 3 (NEO FFI-3) survey and a research-developed demographic questionnaire.

The purpose for choosing a quantitative methodology was that it allowed for an examination of two separate constructs and could assess the relationship between individual personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism and rank of female law enforcement officers. Additionally, quantitative research provided the framework for measuring the variables with validly sound instruments and analyzed the numbered data using statistical models (Cohen et al., 2013). Since dichotomous variables cannot be meaningfully interpreted in multiple regression analysis, dummy coding was incorporated to enhance interpretation of data.

Indicator/dummy variables were simultaneously set as independent variables to enhance interpretation.

Police officers are a unique population to study. Fear of retaliation from the police agency and/or fear of ostracism from fellow officers may have prohibited an officer from a face to face interview where there was no perception of anonymity. The use of surveys in the quantitative research design method provided a platform where the female law enforcement officers could provide honest responses while also protecting their identity, in alignment with Cohen et al., 2013.

Methodology

This study incorporated a systematic and theoretical analysis of personality traits and female law enforcement officers. The following sections detail the population being sampled, the sampling strategy, sampling procedures, recruitment of participants, participant expectations, and data collection.

Population

The target population for the study was sworn female law enforcement officers in both ranking and nonranking positions. Determining the precise number of female law enforcement officers in the United States was complex. The U.S. Department of Justice gathers statistics on local police departments; however, sampling errors must be considered when assessing the accuracy of these estimates. In 2013, the estimated population of full-time sworn female police officers in local departments was 58,000, making up 12% of the total U.S. local police population (U.S. Department of Justice, 2015).

Sampling and Sampling Procedures

In this study, a purposive sample of female officers who were in ranking and nonranking positions were asked to participate. The specific target of female police officers was drawn from the social media webpage LEO-ONLY, a Facebook private group for current and retired law enforcement officers. Due to limited data pertaining to specific law enforcement agencies and the number of sworn female employees, a purposive sample from LEO-ONLY provided the ability to sample female police officers that had joined a networking site of their own volition and from geographically and demographical diverse agencies. All female officers that belonged to LEO-ONLY were asked to participate in the study. The participants were asked to complete an online survey. All participants were required to be current or retired sworn female law enforcement officers.

To determine the appropriate alpha level, effect size, and power level key factors were considered. An alpha level of .05 was chosen as it minimizes the probability of making a Type I error. Cohen (1988) argued that a small effect size provides 1/5 standard of deviation. Therefore, an effect size of .20 was chosen. A high power level of .95 was chosen to minimize a Type II error. The appropriate sample size was calculated using G Power 3.1 (Faul, Erdfelder, Buchner & Lang, 2009) for-multiple regression. A multiple linear regression analysis with five independent (predictor) variables, an alpha level of .05, an effect size of .20, and a power of .95 estimated the desired sample size of a total of 68 female law enforcement officers. Since the inclusion of additional participants

would improve the power of the statistical analysis, 90 to 120 female officers were targeted, specifically, 45-60 participants for each group.

Recruitment, Participation, and Data Collection

I recruited sworn U.S. female police officers nationwide through the social media page LEO-ONLY, a law enforcement-only group page on Facebook. Proof of current and/or retired law enforcement status is required for acceptance into this group by the group's administrators. I obtained permission to use LEO-ONLY as a data collection site from the group's administrators (Appendix A). Female officers interested in participating in the survey were asked to contact me as the researcher. At that time a link to the survey was sent to the prospective participant along with a password to access the survey.

All data were collected through Survey Monkey, an online survey collection platform. Prior to beginning the survey, each participant was presented with a consent form (Appendix B). The informed consent form informed the participants that the responses were confidential. Reassurance was given that no individual or department would be identifiable upon completion of the research. The consent form included the participants' right to terminate the survey at any time throughout the process, as well as, the risks and benefits of the study.

The termination procedures included an exit link on each page of the survey. The exit link directed the participant to an exit letter thanking the participant for their participation and providing the participant with my name and contact information so that contact may be made if there were any questions and/or concerns about any aspect of the research. All participants were allowed to withdraw from the study at any time by

contacting me as the researcher; instructions were provided stating that upon request of the participant, all data obtained from the participant would be removed from the data set. No participants withdrew from the study. The consent also included the Walden University Institutional Review Board (IRB) approval number (#09-08-16-0330982) expiring on September 17, 2017. The participants did not sign the consent form; rather each participant indicated informed consent by clicking on the “agree” button. At that point, the participant gained access to the questionnaire.

Participants completed the NEO-FFI-3 survey, which measured the FFM five personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism. The Psychological Assessment Resources, Inc. licensing agreement (Appendix C) permitted me to use the online collection platform Survey Monkey to collect the NEO-FFI-3 data. I manually input the NEO-FFI-3 into Survey Monkey and exported the raw data scores upon the participant’s completion. After completion of the survey, participants received notification that they had completed all portions of the study. My contact information was provided with an explanation that participants could contact me as the researcher if there were any questions about the research project. The participants were also asked not to reveal the contents of the survey to any other participants.

Instrumentation

This research study used the NEO Five Factor Inventory – 3 (McCrae & Costa, 2007) as the data assessment method. A detailed description of the NEO-FFI-3 along with an explanation of how data were collected was included in the following section.

Purpose

The NEO-FFI-3 (McCrae & Costa, 2010) is a self-report questionnaire consisting of 60 questions that measured the five domains of personality (openness, conscientiousness, extraversion, agreeableness, and neuroticism). The NEO-FFI-3 was chosen for this study due to the applicable features designed to measure the independent (predictor) variables of personality traits. The NEO-FFI-3 scale has been used with adults ranging from 12 years of age and older. The five domains each have six facets. Openness consisted of fantasy, esthetics, feelings actions, ideas, and values. Conscientiousness included competence, order, dutifulness, achievement striving, self-discipline, and deliberation. Extraversion included warmth, gregariousness, assertiveness, activity, excitement seeking, and positive emotion. Agreeableness consisted of trust, straightforwardness, altruism, compliance, modesty, and tender mindedness. Finally, neuroticism included anxiety, hostility, depression, self-conscientiousness, impulsiveness, and vulnerability to stress.

Scoring

The NEO-FFI-3 measured the personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism. This self-report scale can be done as a paper and pencil survey or electronically. In this study it was only offered electronically. It was estimated that it would take approximately 15 minutes for completion of the test. A five point Likert scale was used for each question. The options were: 1=strongly agree, 2=agree, 3=neutral, 4=disagree, and 5=strongly disagree.

Each of the five domains has a high and low scoring. A high scoring implied that the individual has a high likelihood of exhibiting that trait. As Costa and McCrae (1992b) posited, the higher the score, the more likely that the individual would exhibit personality facets. The higher an individual was on the openness to experience scale, the higher the likelihood that the individual would exhibit fantasy, aesthetics, feelings, actions, ideas, and values. The higher an individual was on the conscientiousness scale, the higher the likelihood that the individual would exhibit competence, order, dutifulness, achievement striving, self-discipline, and deliberation. The higher an individual was on the extraversion scale, the higher the likelihood that the individual would exhibit warmth, gregariousness, assertiveness, activity, excitement seeking, and positive emotion. The higher the individual was on the agreeableness scale, the higher the likelihood that the individual would exhibit trust, straightforwardness, altruism, compliance, modesty, and tender mindedness. Finally, the higher the individual was on the neuroticism scale, the higher the likelihood that the individual would exhibit anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability to stress. Permission was obtained from the publisher Psychological Assessment Resources, Inc. to use the NEO-FFI-3 scale as a student user for dissertation purposes (Appendix C).

Psychometric Properties

The NEO-FFI-3 has been tested for validity and reliability by its authors. Costa and McCrae (1992a) originally stated that validity tests were not needed for the original version of the NEO-PI-R. The authors have since included measures to ensure validity including acquiescence, nay-saying, and random responding in a three question format in

the NEO-PI-3 and NEO-FFI-3 (McCrae & Costa, 2007). If any of these three questions are answered in a questionable manner, then the examiner must evaluate the test to determine its validity. Additionally, if a respondent indicated “agree” or “strongly agree” more than 150 or less than 50 times in the NEO-PI-3, then caution should be applied to the results. McCrae and Costa (2010) argued that in a comparison of the NEO-PI-R and the NEO-FFI-3, the NEO-FFI-3 showed a slightly lower consensual validity with coefficients ranging from .66 to .88. This, however, can be explained by the reduced length of the test. The equivalence coefficients between the NEO-FFI-3 and the NEO-PI-R range from .87 to .95, indicating that the NEO-FFI-3 was a good approximation of the full domain scales (McCrae & Costa, 2010). Random responses were considered invalid such as answering consecutive questions similarly. The Likert scale responses did not exceed consecutive questions of six or more for “strongly disagree” nine or more for “disagree” ten or more for “neutral” fourteen or more for “agree” and nine or more for “strongly agree.” In this study, all validity indexes were thoroughly checked.

Young and Schinka (2001) conducted an examination of the reliability and validity of the NEO-PI-R. The findings showed internal consistency reliability regarding negative presentation management (denial of common virtues and attribution of uncommon faults) and positive presentation management (denial of common faults and attribution of uncommon virtues). Young and Schinka also found that the NEO-PI-R was a valid measurement tool by the pattern of convergent and discriminant correlation with other validity scales such as the Personality Assessment Inventory. McCrae and Costa (2010) contend that the validity of the NEO-PI-R is fully applicable to the NEO-FFI-3.

Kurtz and Parrish (2001) conducted a study on the reliability and validity of self-report personality tests. By testing two groups, one a self-report group that took the test in 7 and 14 day delayed intervals and a second group of informants that reported on friends and family twice in a 6-month interval. The authors found that self-report data from the two groups had a high test-retest reliability, stability of responses over time, and high convergent low discriminant validity correlations.

Data Analysis

The data collected was entered into the SPSS software program for statistical analysis. The analysis was intended to address the original research questions:

RQ1: How does the personality trait of Openness relate to rank advancement in female law enforcement officers?

H1_o: The personality trait of Openness does not predict rank advancement among female law enforcement officers.

H1₁: The personality trait of Openness predicts rank advancement among female law enforcement officers.

RQ2: How does the personality trait of Conscientiousness relate to rank advancement in female law enforcement officers?

H2_o: The personality trait of Conscientiousness does not predict rank advancement among female law enforcement officers.

H2₁: The personality trait of Conscientiousness predicts rank advancement among female law enforcement officers.

- RQ3: How does the personality trait of Extraversion relate to rank advancement in female law enforcement officers?
- H3₀: The personality trait of Extraversion does not predict rank advancement among female law enforcement officers.
- H3₁: The personality trait of Extraversion predicts rank advancement among female law enforcement officers.
- RQ4: How does the personality trait of Agreeableness relate to rank advancement in female law enforcement officers?
- H4₀: The personality trait of Agreeableness does not predict rank advancement among female law enforcement officers.
- H4₁: The personality trait of Agreeableness predicts rank advancement among female law enforcement officers.
- RQ5: How does the personality trait of Neuroticism relate to rank advancement in female law enforcement officers?
- H5₀: The personality trait of Neuroticism does not predict rank advancement among female law enforcement officers.
- H5₁: The personality trait of Neuroticism predicts rank advancement among female law enforcement officers.
- RQ6: How does the combination of the personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and/or Neuroticism relate to rank advancement among female law enforcement officers?

H6₀: A combination of the personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and/or Neuroticism does not predict rank among female law enforcement officers.

H6₁: A combination of the personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and/or Neuroticism predict rank advancement among female law enforcement officers.

In this correlational study, multiple regression was chosen as the technique for testing the hypothesis and answering the research question. Data were analyzed in a single analysis to eliminate multiple statistical tests. Any difference found at the .05 level was considered significant.

SPSS statistical software was used for the analysis. According to Osborne and Waters (2002) several tests should be conducted to address the assumptions of variables used in multiple regression. In multiple regression, a linear relationship is required to accurately determine a relationship between the independent variable (personality traits) and the dependent variable (rank). If data showed a nonlinear relationship, a Type II error occurred resulting in an underestimation of the actual relationship. Additionally, if a Type I error had occurred it would have resulted in an overestimation of the actual relationship (Osborne & Waters, 2002). To reduce a Type I or Type II error, an examination of the residual plots was used to determine a linear or nonlinear relationship. A second examination of the residual plots was conducted to check for homoscedasticity. To ensure that the variance of errors was consistent across all personality types (independent

variables) and that heteroscedasticity was not marked, a visual inspection of the residual plots was assessed to minimize the possibility of a Type I error.

Since all surveys that do not have a defined 0 are ordinal, this was accepted as a limitation. The NEO-FFI-3 scoring manual categorized scores in three areas: high, average, and low. T scores ranging from 56 and higher were categorized as high, T scores ranging from 45 to 55 were categorized as average, and T scores ranging from 44 and lower were categorized as low. Data cleaning and screening was conducted in preparation for analysis. A frequency of data was run through SPSS to identify any missing values in the data set. Each missing value was assessed to determine if the participant did not answer the question or if it was a data entry error. All data entry errors were corrected. Any data sets with missing data from participant omission were cleaned using the replace missing values options to substitute the series mean.

Threats to Validity

There are several threats to validity that were a concern. The external threats, or threats to generalizability, were identified. The first was the selection bias threat. Female law enforcement officers are a minority in policing. The size of the department and the internal make-up of the department may have had an effect on the female law enforcement officers' behavior and experiences. To minimize the bias that may have become present by only targeting one police department or one geographical area, potential participants were contacted and made aware of the study via social media page LEO-ONLY that catered to all law enforcement officers world-wide.

Another external threat to validity was low reliability of measures. Poorly worded survey questions and/or inept instrument design increased the threat to validity. In order to address this threat, all questions in the study were viewed and approved by the Walden University Institutional Review Board prior to use. Sample size was another threat to validity. The desired sample size for the proposed study was 68 participants. A small sample size may have produced inaccurate results. In order to address the threat of sample size, 89 to 120 participants were sought.

There were also several internal threats to validity that were addressed. The first was the history of the participant. Each participant completed the survey upon beginning it to minimize any influence that may have occurred during a break in the survey. If the participant choose to stop the test for any reason, she had to start again from the beginning.

Maturation in this study was another threat that was addressed. Short term maturation threats to internal validity may have included a change in the participants' immediate personality or character such as boredom, irritability, and/or inattentiveness. To address short term maturation issues, the survey was available to the participant to take at a time of their choosing. It was anticipated that the participant would take the survey when she was in the mindset to do so. Long term maturation was not a threat to validity. All participants were surveyed only once, therefore, long term changes in personality was not measured.

The threats to validity regarding instrumentation were that the NEO-FFI-3 was available in both print and electronic versions. Boyer, Olson, Calantone, and Jackson

(2002) opined that while both print and electronic surveys are generally comparable, electronic surveys have fewer missing responses. The study was only available in the electronic version to increase response rate.

Ethical Procedures

In this study, protection of participants and ensuring privacy was of utmost concern. Prior to any data collection, institutional permission was obtained from Walden University's Institutional Review Board (Approval #:09-08-16-0330982, Expiration: September 17, 2017). A licensing agreement from Psychological Assessment Resources, Incorporated for the online use of the NEO-FFI-3 was obtained (Appendix C). Consent in the form of a Letter of Cooperation was gained for access to the participants from the LEO-ONLY board (Appendix A). Consent from each participant was electronic, and as such, there was no need to return a separate signed consent form to me (Appendix B). This further ensured the privacy of the participant as all confidential information remained electronic. Due to the online nature of the survey, privacy for the participants was ensured regarding data collection. As noted previously, the consent form listed my contact information in case of possible questions from the participants. Any questions or concerns from participants were immediately addressed to minimize any adverse reactions to the study.

The data will be stored on a password protected USB drive for five years. The USB will be stored in a locked file cabinet. I will be the only individual with access to the confidential data. At the end of the five year period, the USB drive will be erased. A Shredder program will be used to ensure that the data will not be able to be recovered.

Summary

This quantitative study involved an examination of the relationship between the five factor personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism with rank among female law enforcement officers. The participants were asked to complete one survey with two components: the NEO-PI-3 and a demographic survey. The data analysis was comprised of a multiple regression analysis on the five factor personality traits and rank or no rank with a department. All findings on the statistical significance of the variables were made using a criterion alpha of .05. The results of the data collection are presented in Chapter 4 along with the data analysis, and conclusions.

Chapter 4: Results

Introduction

This chapter presents the data collection procedures and the statistical analyses used to address the research questions and hypotheses. The purpose of this quantitative study was to examine the relationship between the five factor model (FFM) personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism and a position of rank or no rank for female law enforcement officers in urban and rural law enforcement agencies. The null hypotheses proposed that each of the personality traits alone and/or in combination with one another would not predict rank advancement among female law enforcement officers. The alternative hypotheses proposed that each of the personality traits alone and/or in combination with one another would predict rank advancement among female law enforcement officers.

This study was based on six research questions:

RQ1: How does the personality trait of Openness relate to rank advancement in female law enforcement officers?

H1₀: The personality trait of Openness does not predict rank advancement among female law enforcement officers.

H1₁: The personality trait of Openness predicts rank advancement among female law enforcement officers.

RQ2: How does the personality trait of Conscientiousness relate to rank advancement in female law enforcement officers?

- H2₀: The personality trait of Conscientiousness does not predict rank advancement among female law enforcement officers.
- H2₁: The personality trait of Conscientiousness predicts rank advancement among female law enforcement officers.
- RQ3: How does the personality trait of Extraversion relate to rank advancement in female law enforcement officers?
- H3₀: The personality trait of Extraversion does not predict rank advancement among female law enforcement officers.
- H3₁: The personality trait of Extraversion predicts rank advancement among female law enforcement officers.
- RQ4: How does the personality trait of Agreeableness relate to rank advancement in female law enforcement officers?
- H4₀: The personality trait of Agreeableness does not predict rank advancement among female law enforcement officers.
- H4₁: The personality trait of Agreeableness predicts rank advancement among female law enforcement officers.
- RQ5: How does the personality trait of Neuroticism relate to rank advancement in female law enforcement officers?
- H5₀: The personality trait of Neuroticism does not predict rank advancement among female law enforcement officers.
- H5₁: The personality trait of Neuroticism predicts rank advancement among female law enforcement officers.

RQ6: How does the combination of the personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and/or Neuroticism relate to rank advancement among female law enforcement officers?

H6₀: A combination of the personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and/or Neuroticism does not predict rank among female law enforcement officers.

H6₁: A combination of the personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and/or Neuroticism predict rank advancement among female law enforcement officers.

Data Collection

Participants were recruited through the social media Facebook page LEO-ONLY. I refreshed the letter to participants daily to maintain priority status on the Facebook page. Participants were required to have contact with me via a private message to obtain the link and password to the survey. The study consisted of an online survey that was available only through the online platform Survey Monkey. Data collection occurred for a two-week period.

The minimum sample size for this study was between 90 to 120 participants. More specifically, 45-60 participants in both the rank and no rank groups were sought. In the two-week collection period, a total of 114 participants completed the survey. Of the 114 participants, seven (6%) surveys were excluded from the sample due to exclusion criteria. The study excluded participants that did not indicate a rank/no rank status ($n=3$) and those that did not complete the study past the demographic questions ($n=4$).

The demographic summary presented is based on the 107 participant surveys viable for research purposes. Of the 107 final participants, all (100%) indicated that they were current sworn or retired female law enforcement officers. As described in Table 1, participants were categorized into two groups: rank and no rank. The rank group consisted of 48 participants (45%), while the no rank group consisted of 59 participants (55%). The total response rate provided a sample of approximately 0.2% of the total population of female law enforcement officers. This was roughly twice the estimated minimum sample size as indicated by G Power 3.1 for multiple regression, which was a total of 68 female law enforcement officers. Additional participants were included to improve the power of statistical analysis.

Table 1

Frequency Distribution of Study Participant Rank

	Frequency	Percentage
No rank	59	55%
Rank	48	45%
Total	107	100%

Eleven participants were missing responses to the NEO-FFI-3. For those questions, the missing values were replaced with the neutral value. This differs from the procedure described in Chapter 3 which stated that the average value would be used. The reason neutral was used rather than the average was to avoid ascribing characteristics to participants which they did not indicate. In total, eight participants had one replacement

of neutral, one participant had two replacements of neutral, and two participants had three replacements of neutral. All other participants responded to all questions.

Results

Simple descriptive statistics were calculated for each group's personality traits prior to running the multiple regression analysis (Table 2). The group means were notably similar to one another across all five personality traits.

Table 2

Descriptive Statistics of Personality Traits

	Rank	No Rank
	<i>M (SD)</i>	<i>M (SD)</i>
Openness	28.4 (5.7)	28.1 (6.2)
Conscientiousness	37.9 (4.4)	36.9 (5.0)
Extraversion	31.4 (5.5)	30.4 (6.6)
Agreeableness	29.9 (6.8)	31.2 (6.2)
Neuroticism	17.0 (6.1)	17.7 (8.6)

The goal of this study was to determine the relationship between the FFM personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism alone or in combination to rank or no rank in female law enforcement officers. Multiple regression analysis showed that there were no significant correlations between any of the five personality traits and rank or no rank, $F(5,106)=.748, p=0.589$.

Multiple regression was chosen for data analysis because of familiarity and convention.

A binary logistic regression was completed to confirm the findings and revealed similar results.

Table 3

Correlation Matrix

	No rank / Rank	O	C	E	A	N
No rank / Rank	-	0.031	0.103	0.089	-0.104	-0.043
Openness		-	0.034	0.321**	0.198*	-0.083
Conscientiousness			-	0.357**	0.135	-0.429**
Extraversion				-	0.337**	0.409**
Agreeableness					-	-0.387**
Neuroticism						-

* $p < .05$, ** $p < .01$.

Note. O=openness, C=conscientiousness, E=extraversion, A=agreeableness, N=neuroticism

To test for homoscedasticity, the residuals were plotted against the dependent variable (Figure 1). A visual inspection indicated that error was similar between both levels of the dependent variable, suggesting that the data were homoscedastic. Homoscedastic data indicate that the variance of error between the dependent and independent variables is the same across all values of the independent variables (openness, conscientiousness, extraversion, agreeableness, and neuroticism).

Figure 1. Plot of the Standardized Residuals

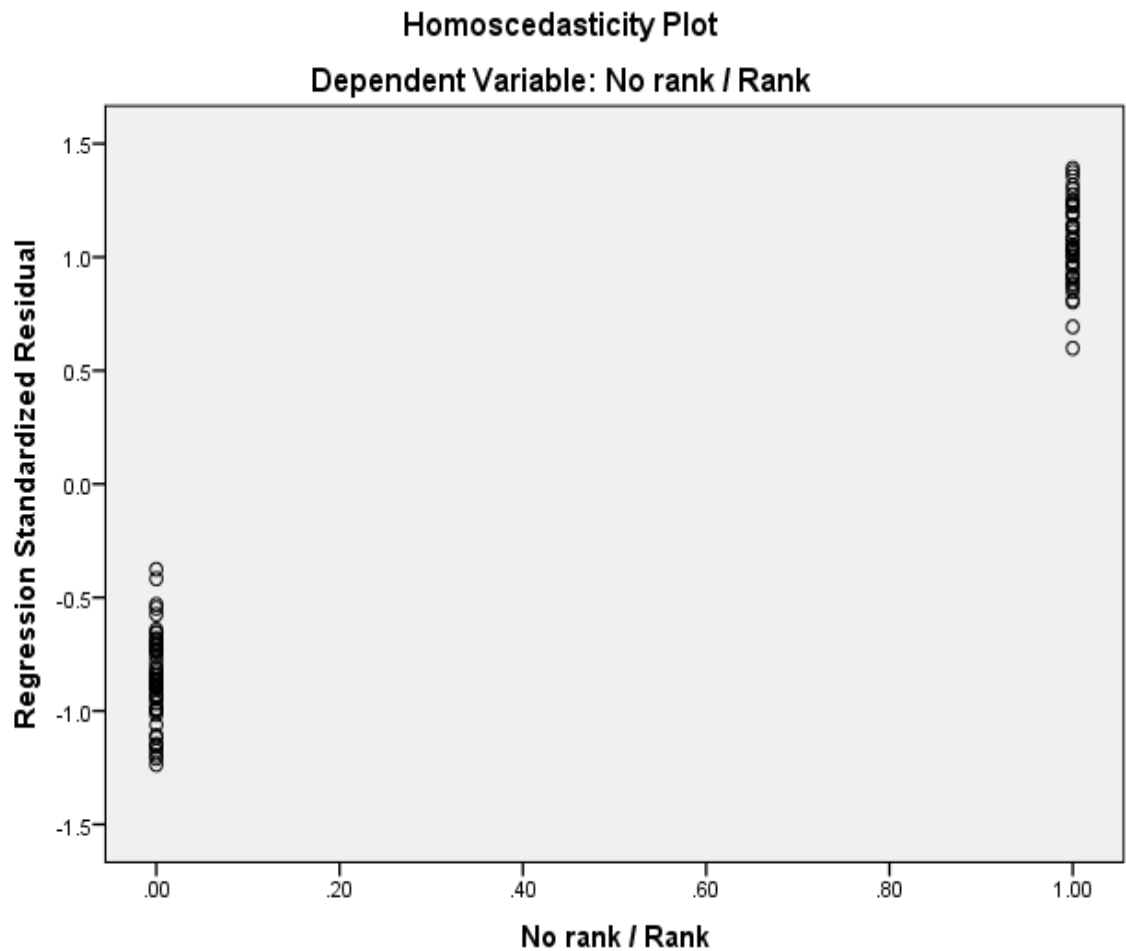


Figure 1. Plot of the standardized residuals against the dependent variable rank/no rank. The error appears to be similar for both rank and no rank, indicating homoscedasticity.

The specific hypotheses for this study were tested as follows:

Hypothesis 1: To test the hypothesis that the personality trait of openness predicts rank advancement among female law enforcement officers the correlation matrix was

referenced. Openness was not significantly correlated with rank or no rank, $r=0.031$, $p=0.375$. Thus, the null hypothesis was not rejected.

Hypothesis 2: To test the hypothesis that the personality trait of conscientiousness predicts rank advancement among female law enforcement officers the correlation matrix was referenced. Conscientiousness was not significantly correlated with rank or no rank, $r=0.103$, $p=0.145$. Thus, the null hypothesis was not rejected.

Hypothesis 3: To test the hypothesis that the personality trait of extraversion predicts rank advancement among female law enforcement officers the correlation matrix was referenced. Extraversion was not significantly correlated with rank or no rank, $r=0.089$, $p=0.182$. Thus, the null hypothesis was not rejected.

Hypothesis 4: To test the hypothesis that the personality trait of agreeableness predicts rank advancement among female law enforcement officers the correlation matrix was referenced. Agreeableness was not significantly correlated with rank or no rank, $r=-0.104$, $p=0.143$. Thus, the null hypothesis was not rejected.

Hypothesis 5: To test the hypothesis that the personality trait of neuroticism predicts rank advancement among female law enforcement officers the correlation matrix was referenced. Neuroticism was not significantly correlated with rank or no rank, $r=-0.043$, $p=0.330$. Thus, the null hypothesis was not rejected.

Hypothesis 6: To test the hypothesis that a combination of the personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism predict rank advancement among female law enforcement officers the correlation matrix was

referenced. The five personality traits were not significantly correlated with rank or no rank, $r=-0.036$, $p=0.589$. Thus, the null hypothesis was not rejected.

Notable findings from the analysis indicated that in each of the five domains (openness, conscientiousness, extraversion, agreeableness, and neuroticism) both the rank and no rank groups had average domain scores. An average domain score is in the middle of the spectrum that ranged from very low, low, average, high, and very high. These findings are discussed in Chapter 5.

Summary

Overall, the results of the study indicated that there are no significant correlations between the FFM personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism and rank or no rank in female law enforcement officers. The data suggest a high degree of similarity in personality traits between rank and no rank officers. Chapter 5 addresses the implications of these results in the context of the police personality and female law enforcement. Chapter 5 also addresses limitations of the study and recommendations for future research.

Chapter 5: Discussion, Conclusion, and Recommendations

Introduction

The purpose of this quantitative study was to examine the relationship between the five factor model (FFM) personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism (independent variables) and rank or no rank (dependent variables) in female law enforcement officers. This study was designed to address a gap in the research pertaining to personality traits and promotion in law enforcement.

A total of 107 participants were involved in the study: 48 ranking and 59 nonranking sworn female current and/or retired law enforcement officers. Each participant was provided and agreed to an informed consent statement that explained privacy rights and confidentiality. Anonymity was ensured by not requiring a signature on the consent form and through blind online survey participation.

The results of this study indicated that there was no statistically significant relationship between individual or combined FFM personality traits and rank in female law enforcement officers. There were, however, notable findings that resulted from this study. In the personality trait of openness both the rank and no rank groups resulted in a profile of average; the middle of the spectrum. An average score for openness indicated that the individual was practical yet willing to explore new options and seeks balance between the old way of doing things and the new. Regarding the personality trait of conscientiousness, both the rank and no rank groups resulted in a profile of average, showing the middle of the spectrum. An average score for conscientiousness indicated

that the individual was likely dependable, well-organized, and has clearly defined goals yet was able to set work aside for other interests. In the personality trait of extraversion both the rank and no rank groups resulted in a profile of average; the middle of the spectrum. An average score in extraversion indicated that individual was expected to exhibit moderate levels of enthusiasm and activity. Additionally, the average extrovert enjoys the company of others yet is content being alone. The personality traits of agreeableness in both the rank and no rank groups also resulted in a profile of average; the middle of the spectrum. An average score of agreeableness indicated that the individual was generally trusting and affable, however, can also be stubborn and competitive when needed. In the final personality trait of neuroticism, both the rank and no rank groups resulted in an average score, however, on the low end of average. An average profile in neuroticism indicated that the individual was often calm and deals with stress well, however, at times experiences stress, guilt, and anger. A low profile in neuroticism indicated that the individual was generally secure and handles stressful events well. The overall findings indicated that there were average scores in both groups in all five domains, with neuroticism falling on the low end of average.

Interpretation of the Findings

This study was driven by previous research on female law enforcement officers, as well as research on personality traits and promotion. The outcome of this study was that a significant relationship between individual and/or a combination of personality traits and rank in female law enforcement officers was not found. The data from the

present study both confirm and contrast previous research regarding female law enforcement officer promotional aspirations and systemic barriers.

Morash and Haarr (2012) found that lower ranking female officers tend to ascribe to more traditional gender roles which are contradictory to the current findings. According to Morash and Haarr, lower-ranking women tend to ascribe to the traditional gender roles such as submissive, emotional, and empathetic. Applying this assertion to the NEO-FFI-3 inventory summary would indicate that lower-ranking women would exhibit low on extraversion (reserved and passive), high on agreeableness (compassionate and conflict avoidance), and high on neuroticism (sensitive and prone to giving in to feelings). While it was unknown what traditional gender roles each participant ascribes to, it was evident that both groups (rank and no rank) scored similarly on the NEO-FFI-3 in all five domains. This resulted in similar personality trait profiles across both groups contradicting a notable difference in personality traits identified in ranking and nonranking female law enforcement officers.

Gardner et al. (2012), Schmidt (2014), and Detrick and Chibnall (2013) argued that personality traits are a predictor in organizational fit and performance. High scores of conscientiousness and lower scores of agreeableness tend to be a better fit for the organization. The present study used Gardner et al., Schmidt's, and Detrick and Chibnall's research as a foundation for the hypotheses. Neither high scores on conscientiousness nor low scores on agreeableness appeared to have a fundamental effect when evaluating personality traits and rank. Furthermore, Sanders (2008) argued that personality traits have less of an effect on police performance than age and attitude did.

The results of the five domain scores of average in both the rank and no rank groups implied that personality traits among sworn female officers are similar, regardless of rank. Additionally, Salters-Pedneault et al. (2010) contended that police recruits scored higher on the extraversion domain than the general public. While the general public was not compared to police in the present study, both the rank and no rank groups presented an average profile in extraversion, contradicting Salters-Pedneault et al.'s suggestion that this population has high profiles.

There are several possibilities why the current research contradicts Salters-Pedneault et al.'s. research. One reason may be that Salters-Pedneault et al. focused on police recruits in the academy. It is unknown how long the participants in the present study had been active officers, however, it is known that they were sworn officers. It is also known that the rank group had been sworn officers for a predetermined time prior to achieving rank, which is supported by minimum qualifications agencies adhere to regarding time requirements necessary to apply for promotion (Workman, 2015). It is possible that experiences that an officer was exposed to may influence the fluctuation between a high and low profile within a certain personality trait. Age, attitude, experiences, and time in the profession may all affect an individual officer's personality traits.

Examining the relationship between personality traits and rank for female law enforcement officers was the primary purpose of this study. Although a relationship was not found in accordance to the hypotheses, the symmetry in domain scores in both groups supports Schafer's (2010) findings regarding traits and leadership in law enforcement.

Schafer suggested that personality traits were related to leadership development. Having a balanced domain profile of average in all five traits assisted in summarizing the individual's emotional stability, sociability, experiential, interpersonal tendencies, and impulse control. The findings of the current study and the average personality trait profiles supported conforming personality traits and leadership development in both groups. The average profiles in all five domains in both groups did not support the existence of a difference in predicting promotion in either group. An average profile in each personality trait also indicated the participant did not differ among people in general.

The findings of the study did not show a statistically significant relationship between personality traits and rank in female law enforcement officers. The FFM was designed to describe where an individual stands on each of the five domains of openness, conscientiousness, extraversion, agreeableness, and neuroticism (McCrae & Costa, 2010). By using the FFM, the study was designed to identify a pattern or range of personality traits in each group, rank and no rank. While a relationship was not found between FFM personality traits and rank or no rank, an unexpected consistent pattern was found in female law enforcement officers. According to McCrae and Costa, this consistent pattern may help in identifying or classifying individuals that are predisposed to behave in a certain fashion. While the important findings of the present study were not in direct relation to previous studies, the study does extend the literature on promotion and female law enforcement officers by exploring the relationship between personality traits and rank.

Limitations of the Study

There are limitations that influence the findings, generalizability, and validity of the study. These limitations should be taken into account when interpreting the data. The first limitation was the method in which participants were recruited. Using the Facebook social media page LEO-ONLY, participants were limited to those that ascribed to social media participation. Wang (2013) contended that individuals who conduct regular check-ins on Facebook were higher in extraversion than other users. Additionally, individuals with higher levels of agreeableness were more likely to share information on Facebook. In this study, it was unclear if Wang's study and the willingness to participate in an online study of this nature were influenced by higher levels of extraversion and/or agreeableness.

The design choice and the decision to only focus on the participants ranking status and personality traits is a second limitation. There was lack of data on the participant's personal experiences such as age, education, systemic barriers in law enforcement, and familial issues. The only demographics collected were gender and the participants rank. In multiple regression research, relationships can be determined; however, underlying causal mechanisms cannot. It is unknown if any of these factors had an effect on the participants' personality traits.

A third potential limitation was the sample size. Although the number of participants (107 participants) exceeded the estimated sample size as indicated by G Power 3.1 (68 participants), the overall sample represented approximately 0.2% of the estimated total population of female law enforcement officers. A larger sample size that

included female officers not associated with the LEO-ONLY page as well as demographics such as age, education, and experiences levels would be useful in minimizing the limitations of future studies in this area.

A final limitation would be the potential for the participants to answer a question in a manner consistent to that expected in law enforcement. All participants were contacted via a law enforcement social media site. There may be a possibility that the participant's answered the NEO-FFI-3 in relation to law enforcement personality rather than home and/or personal personality. While it is unknown if there was a difference in work and personal personality traits in the participants, thinking about work behaviors may have altered a participant's answer to a NEO-FFI-3 question.

Recommendations for Future Research

This study should be used as a means of examining the relationship between personality traits and rank in law enforcement. Although a statistically significant relationship between the FFM personality traits and rank was not found, this does not mean that there is no relationship between personality traits and rank in law enforcement. Perhaps the FFM was not the optimal approach to examine the relationship between rank and personality traits. Consideration should be given to alternate personality inventories.

The goal of this study was to examine the relationship between the FFM personality traits and rank of female law enforcement officers. An increasing amount of research has been devoted to females in law enforcement, however, a gap remains pertaining to female officer promotion and aspiration for promotion. Previous research indicated that systemic barriers such as an undesirable position, tokenism, family

obligations, and a negative work environment influenced a female officer's desire for promotion (Archbold & Moses Schultz, 2012). To verify the results of this study, it is recommended that future research incorporate systemic barriers when examining personality traits and promotion. Systemic barriers and/or overcoming systemic barriers may be a contributing factor in the relationship between personality traits and rank in female law enforcement officers. Qualitative research to identify current systemic barriers faced by female law enforcement officers in ranking and nonranking positions, as well as, identifying females that have overcome those barriers would identify a group of potential participants for examination regarding personality traits and rank. Additionally, a mixed methodology could be used to examine the systemic barriers, factors involved in overcoming the barriers, and personality traits in rank of female law enforcement officers.

Research regarding personality and rank of female law enforcement officers should include academics, level of education, training opportunities, age, and time on the department. According to Gau et al. (2013), education, race, and gender were all influencing factors regarding a desire for police promotion. It would be useful to examine these demographic factors in correlation to personality and rank.

Implications for Positive Social Change

The intent of this study was to examine the relationship between the FFM personality traits and rank in female law enforcement officers, and if results of significance were found, law enforcement agencies may be able to identify female officers predisposed to leadership roles. The study analysis, however, did not show a

significant correlation. From an organizational perspective, personality assessments alone are not sufficient in identifying female officers for potential promotions.

While a significant relationship between the FFM personality traits and rank was not found, this study has implications for positive social change. Personality traits as measured by the FFM alone cannot be used as a predictor for rank in female law enforcement officers. This study may support research that examines personality traits as a factor related to promotability in law enforcement. The average domain scores in all five personality trait categories for both ranking and nonranking female officers indicate personality trait similarities in both groups. Using average personality trait scores as a factor in predicting rank may allow law enforcement agencies to identify and mentor individuals with those personality traits into ranking positions within the agency. Research about police mentoring programs has shown an increase in productivity, morale, and a higher level of engaged learning (Hundersmark, 2009; Sun, 2003). Early identification can assist in placing those female officers in mentoring programs specifically designed to increase female promotional growth. This study will provide a platform that allows administration to identify the specific traits that significantly increase the likelihood of rank.

As previously noted, research into female officer promotion and promotional aspirations is limited. This study contributes to the efforts currently underway in both personality research, as well as research on female law enforcement officers. By understanding the relationship between personality traits and rank, law enforcement agencies are better equipped at identification of female officers that have a potential for a

successful promotion and/or promotability. As a result of this study, future research may use the FFM personality traits and rank as a foundation. This study may also be used to support the use of different personality measures when examining personality and rank. More research needs to be done to assist female law enforcement officers in the effort to reduce the disparity in the occupational divide regarding rank in law enforcement.

Conclusion

This study showed that the FFM personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism alone or in combination with one another are not a significant predictor of a female police officer's rank. Thus, the NEO-FFI-3 should not be used exclusively as a predictor in identifying a female officer that seeks to rise to a ranking level in an agency. This study, however, contributed to the existing body of research by exploring the relationship of personality traits and rank. The organizational issue that there are a limited number of female officers in law enforcement, specifically ranking positions, continues to be a concern. The findings of this study should be interpreted cautiously as further research pertaining to female law enforcement officers in ranking and nonranking positions is needed.

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Appendix A: Letter of Cooperation

Letter of Cooperation from a Research Partner

LEO-ONLY
Craig Polen, Administrator
186 Hancock Rd
Bellefonte, PA 16823

July 18, 2016

Dear Ms. Kelly Treece,

Based on my review of your research proposal, I give permission for you to conduct the study entitled Personality and promotion; A critical look at the structured rank of female officers within the LEO-ONLY forum. As part of this study, I authorize you to contact potential research participants by posting a recruitment invitation on the LEO-ONLY Facebook page. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include the approval of one or more recruiting postings. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

Craig Polen
186 Hancock Rd.
Bellefonte, PA 16823
570-263-0209
Sgtpolen@hotmail.com

Walden University policy on electronic signatures: An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically. Electronic signatures are regulated by the Uniform Electronic Transactions Act. Electronic signatures are only valid when the signer is either (a) the sender of the email, or (b) copied on the email containing the signed document. Legally an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. Walden University staff verify any electronic signatures that do not originate from a password-protected source (i.e., an email address officially on file with Walden).

Appendix B: Consent Form

You are invited to take part in a research study about the relationship between personality traits and the rank of female law enforcement officers. The researcher is inviting all sworn female law enforcement officer to be in the study. I obtained your name/contact info via LEO-ONLY on Facebook with the permission of the site administrators. This form is part of a process called “informed consent” to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Kelly Treece, who is a doctoral student at Walden University.

Background Information:

The purpose of this study is to examine the relationship between personality traits and rank of female law enforcement officers.

Procedures:

If you agree to be in this study, you will be asked to:

- Complete a personality test with an estimated 15 minute completion time.

Here are some sample questions:

- I rarely feel fearful or anxious.
- I like to have a lot of people around me
- I tend to assume the best about people.

Voluntary Nature of the Study:

This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at Walden University will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time. If you are not eligible to participate in the study, you will be notified during/after the demographic survey.

Risks and Benefits of Being in the Study:

Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as stress and becoming upset. Being in this study would not pose risk to your safety or wellbeing.

The benefit of the study is to determine if there is a personality trait difference between female officers of rank and no rank positions. Determining if there is a difference in personality traits will allow police departments to identify females that have specific traits that are predisposed to leadership roles.

Payment:

No payment will be received for participation in this study.

Privacy:

Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by the researcher. The data will be stored on a password protected USB drive. The USB will be stored in a locked file cabinet. The

researcher will be the only individual with access to the confidential data. At the end of the five year period, the USB drive will be erased. A Shredder program will be used to ensure that the data will not be able to be recovered. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via telephone (414-630-8969) or email at kelly.treece@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 612-312-1210. Walden University's approval number for this study is 09-08-16-0330982 and it expires on September 7, 2017.

Please print or save this consent form for your records.

Appendix C: Psychological Assessment Resources Licensing Agreement

LICENSE AGREEMENT

THIS AGREEMENT, made this April 21, 2016, by and between Psychological Assessment Resources, Inc., a Florida Corporation, with its principal offices located at 16204 North Florida Avenue, Lutz, Florida 33549, hereinafter referred to as PAR, and Kelly S. Treece, with her principal offices located at Walden University, 899 Walnut Street, Glenville, WV 26351, hereinafter referred to as Licensee.

1) RECITALS

PAR has developed and holds all copyrights and distribution rights to certain psychological tests and related materials as listed in Schedule A, hereinafter called "Test". The Test consists of PAR's items, scoring keys, scales, profiles, standard-score conversion tables, norms tables, interpretive information, and related materials created, prepared, devised, and combined by PAR for the administration, scoring, reporting, and analysis of the Test, and includes the words, symbols, numbers, and letters used to represent the Test. Licensee desires to develop automated procedures for the secure and encrypted administration of the Test through Licensee's secure internet assessment website utilizing Survey Monkey. The access to Licensee's website will be by invitation only in connection with Licensee's research titled, *Personality and promotion: A critical look at the structured rank of female police officers* and to subjects for this research purpose only (the "Limited Purpose(s)"). Unless permitted to do so by a separate license agreement, Licensee only has the right to use the Test for the Limited Purpose described above. In consideration of the mutual covenants and promises expressed herein and other good and valuable considerations, it is agreed as follows:

2) LICENSE

PAR hereby grants to Licensee, subject to the terms of this Agreement, a non-transferable, non-refundable, non-exclusive license to place the Test on Licensee's Website for the Limited Purpose described in Section 1 above. Licensee agrees to hold secure and treat as proprietary all information transferred to it from PAR. Licensee shall carefully control the use of the Test for the Limited Purpose described in this Agreement.

Licensee's use of the Test will be under the supervision or in consultation with a qualified psychologist or other qualified individual and consistent with the then current edition of the Standards for Educational and Psychological Testing published by the American Psychological Association.

3) TERMS AND TERMINATION

The initial term of this Agreement shall extend from August 1, 2016 through December 31, 2016, and may be extended only by mutual agreement of the parties. Notwithstanding any other provision of this Agreement, this Agreement may be terminated if any of the following events occur:

(a) Termination is mutually agreed to by the parties.

(b) Licensee defaults in the performance of any of its duties hereunder.

On the effective date of expiration or termination of this Agreement pursuant to subsections (a) and (b) above, all rights in this Agreement revert to PAR. Computer software programs written by or for Licensee remain the property of Licensee. Licensee warrants that upon expiration or termination of this Agreement under subsections (a) and (b) above, and except as set forth in any separate license agreement relating thereto, all portions of the Test licensed hereunder shall be removed from Licensee's Website. Failure to cease all uses of the Test shall constitute copyright infringement.

4) TERMINATION RIGHTS

In the event of termination pursuant to paragraph 3 above for any reason, PAR shall not be liable to Licensee for compensation, reimbursement or damages for any purpose, on account of any expenditures, investments, leases or commitments made or for any other reason whatsoever based upon or growing out of this Agreement.

5) CONDITIONS OF USE

PAR shall have the right to review, test, and approve that portion of Licensee's Website which includes the Test. Following PAR's approval of that portion of Licensee's Website containing the Test, the manner in which the Test appears on such Website shall not be changed in any material way without prior approval of PAR.

The computer programs developed by Licensee and used in any phase of administration and scoring of the Test shall be fully tested by Licensee and shall be encrypted and reasonably protected from access, intrusion and changes by persons who are not authorized agents of Licensee. In addition to the foregoing, Licensee shall exert all reasonable commercial efforts to prevent the Programs, and any accompanying code for the administration of the Test from being accessed, viewed or copied by others. Licensee warrants the accuracy of such scoring and reporting.

6) PROPRIETARY RIGHTS

PAR is the owner of all right, title and interest in the Test. Licensee shall acquire no right or interest in the Test, by virtue of this Agreement or by virtue of the use of the Test, except the right to use the Test in accordance with the provisions of this Agreement. Licensee shall not modify or revise the Test in any manner without written approval by PAR. All uses of the Test by Licensee shall inure to the benefit of PAR. Licensee agrees not to challenge or otherwise interfere with the validity of the Test or PAR's ownership of them.

7) ROYALTIES

Licensee agrees to pay PAR a royalty fee for use of the Test and copyrighted materials contained therein, at the rate of \$2.25 per each test administration of the Test. Licensee will also provide PAR with an itemized accounting of all administrations of each Test administered by Licensee during the term of this agreement. Licensee shall pay to PAR Two Hundred and Seventy US Dollars (\$270.00) as an initial license fee (\$2.25 per administration for 120 administrations), which is due and payable upon the signing of this License Agreement. Licensee shall also pay PAR \$2.25 per each test administered for any tests administered above 120 by January 15, 2017. This fee includes a 40% student discount.

8) ACCOUNTING

Licensee shall develop secure computerized accounting methods acceptable to PAR. Such accounting methods must include an electronic counting mechanism which will accurately record the number of administrations of each Test used. Licensee will keep accurate financial records of all transactions relating to the use of the Test, and PAR shall have the right to examine the software and records of Licensee pertaining to the use of the Test. Licensee will make such software and records accessible to PAR or its nominee during normal working hours upon not less than five (5) business days' prior written notice. Licensee shall retain such software and records for at least one year from the date this Agreement expires or the effective termination date.

The Website shall contain the following copyright notice:

"Adapted and reproduced by special permission of the Publisher, Psychological Assessment Resources, Inc., 16204 North Florida Avenue, Lutz, Florida 33549, from the NEO Five-Factor Inventory-3 by Paul Costa, Jr., PhD and Robert McCrae, PhD, Copyright 1978, 1985, 1989, 1991, 2003, 2010 by PAR. Further reproduction is prohibited without permission of PAR."

9) INDEMNITY

Licensee agrees to indemnify PAR and hold PAR harmless against any claim or demand or against any recovery in any suit (including taxes of any kind, reasonable attorney's fees, litigation costs, and other related expenses) that may be:

- (a) brought by or against PAR, arising or alleged to have arisen out of the use of the Test by Licensee;
- (b) sustained or incurred by PAR, arising or alleged to have arisen in any way from the breach of any of Licensee's obligations hereunder; or
- (c) incurred by PAR in any litigation to enforce this Agreement, including litigation against Licensee.

10) ASSIGNMENT

Licensee shall not assign this Agreement or any license, power, privilege, right, or immunity, or delegate any duty, responsibility, or obligation hereunder, without the prior written consent of PAR. Any assignment by PAR of its rights in the Test shall be made subject to this Agreement.

11) GOVERNING LAW

This Agreement shall be construed according to the laws of the State of Florida of the United States of America. Venue for any legal action relative to this Agreement shall be in the appropriate state court in Hillsborough County, Florida, or in the United States District Court for the Middle District of Florida, Tampa division. Licensee agrees that, in any action relating to this Agreement, the Circuit Court in Hillsborough County, Florida or the United States District Court for the Middle District of Florida, Tampa Division, has personal jurisdiction over Licensee, and that Licensee waives any argument it may otherwise have against the exercise of those courts' personal jurisdiction over Licensee.

12) SEVERABILITY

If any provision of this Agreement shall, to any extent, be invalid and unenforceable such provision shall be deemed not to be part of this Agreement, and the parties agree to remain bound by all remaining provisions.

13) EQUITABLE RELIEF

Licensee acknowledges that irreparable damage would result from unauthorized use of the Test and further agrees that PAR would have no adequate remedy at law to redress such a breach. Therefore, Licensee agrees that, in the event of such a breach, specific performance and/or injunctive relief, without the necessity of a bond, shall be awarded by a Court of competent jurisdiction.

14) ENTIRE AGREEMENT OF THE PARTIES

This instrument embodies the whole Agreement of the parties. There are no promises, terms, conditions, or obligations for the Test licensed hereunder other than those contained herein; and this Agreement shall supersede all previous communications, representations, or agreements, either written or verbal, between the parties hereto, with the exception of any prior agreements that have not previously been terminated by written consent of both parties or by one party if the terms of the agreement allow. This Agreement may be changed only by an agreement in writing signed by both parties.

15) NOTICES AND MODIFICATIONS

Any notice required or permitted to be given under this Agreement shall be sufficient if in writing and if sent by certified or registered mail postage prepaid to the addresses first herein above written or to such addresses as either party may from time to time amend in writing. No letter, telegram, or communication passing between the parties hereto covering any matter during this contract, or periods thereafter, shall be deemed a part of this Agreement unless it is distinctly stated in such letter, telegram, or communication that it is to constitute a part of this Agreement and is to be attached as a right to this Agreement and is signed by both parties hereto.

16) SUCCESSORS AND ASSIGNS

Subject to the limitations on assignments as provided in Section 10, this Agreement shall be binding on the successors and assigns of the parties hereto.

17) PARAGRAPH HEADINGS

The paragraph headings contained in this Agreement are inserted only for convenience and they are not to be construed as part of this Agreement.

18) AUTHORIZATION AND REPRESENTATION

Each party represents to the others that it has been authorized to execute and deliver this Agreement through the persons signing on its behalf.

IN WITNESS WHEREOF, the parties have executed this Agreement in duplicate on the date first herein above written.

ACCEPTED AND AGREED:

Walden University:

BY: Kelly Treece
KELLY S. TREECE

Title: STUDENT

DATE: 9/6/16**ACCEPTED AND AGREED:**

PAR, Inc.:

BY: R. Bob Smith III
R. BOB SMITH III, PH.D.

Title: CHAIRMAN AND CEO

DATE: 9-12-2016

PAYMENT RECEIVED: MC
PAR CUSTOMER No.: 87644

SIGNATURE OF PROFESSOR REQUIRED:

I hereby agree to supervise this student's use of these materials. I also certify that I am qualified to use and interpret the results of these tests as recommended in the *Standards for Educational and Psychological Testing*, and I assume full responsibility for the proper use of all materials used per this Agreement.

BY: Nancy S. Bostain
Printed Name: Dr. Nancy S. Bostain

SCHEDULE A

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1) NEO Five-Factor Inventory-3 (NEO-FFI-3) Form S

Adult Item Booklet Permission is also granted for you to include up to a total of three (3) sample items from the NEO-FFI-3 in your dissertation, any further publication in a Journal (or otherwise) will require additional permission